

Hydronic Zone Valves

FOR HIGH AND LOW CAPACITY APPLICATIONS



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White-Rodgers Hydronic Zone Valves

A CONTRACTOR'S BEST FRIEND



ZONE VALVES NOMENCLATURE

13 V16 - 101

Zone Valve

Pipe Type:

V – Inverted Flare
F – Flare
N – National Pipe Thread
S – Sweat

Pipe Size:

100 – 3/8"
101 – 1/2"
102 – 3/4"
103 – 1"

Operation:

05 – Normally Open
06 – Normally Open with auxiliary
15 – Normally Closed
16 – Normally Closed with auxiliary

Long Life

White-Rodgers zone valves are designed for 2-way straight through positioning with return spring for hydronic systems. The return spring feature provides for a fail-safe position and is made of stainless steel for longer life. The plastic moulded zone valve cover provides extra protection for the electrical components from excess moisture or moisture caused by splashing.

The zone valves are powered by an electric, synchronous motor for longer life and have been riveted to a one-piece anodized steel motor bracket. The motor can assume two operating positions depending on whether the motor is activated or not. This type of two-position (on-off) control of fluid flow can be utilized in a variety of heating and cooling applications. Wiring connections to the motor are made with an 18" 5-conductor, 18-gauge, and an SJ-type rubber cable with integral strain relief and 3" back stripped ends.

Physical Features

The valve body and crank arm assemblies are each made from one-piece cast brass construction. The casting eliminates distortion from heat, over-tightening, and years of operation. The gears are also made from heavy 14-gauge brass for durable, precise construction. The valve assembly utilizes a recessed "O" ring, which provides a positive seal.

Trustworthy

White-Rodgers zone valves have a swing-type ball valve made from EPDM (Ethylene Propylene Polymer) material. EPDM enables the zone valve to resist temperatures up to 230°F. The swing-type style is designed to rotate, which causes the ball plug to seat on a different section of its surface on each closing, meaning less wear on the valve. The raised ball seat ensures there is a positive valve closure and the ball surface wears evenly.





Valves Options

The series includes several piping options; sweat or NPT bodies, inverted flare, and flare fitting end connections for the standard copper tubing. The zone valves are direct replacements for competitive models from Honeywell and Erie.

SELECTION CHART

Model Number	Tubing Size (I.D. Pipe)	Pipe Connection	Auxiliary Switch	De-energized Position	Replaces	
13V16 -101	1/2"	Inverted Flare	Yes	NC	V8043E1129	VT234G13A02A
13V06 -101	1/2"	Inverted Flare	Yes	NO		VT2343G23A02A
13F05 -100	3/8"	Flare	No	NO	V8043D1197	VT2253G23A020
13FA05 -100	3/8"	Flare	No	NO	V8043D1080	VT2253G23A0200F
13F15 -100	3/8"	Flare	No	NC	V8043A1003	VT2253G13A020
13FA15 -100	3/8"	Flare	No	NC	V8043C1033	VT2253G13A0200F
13F16 -100	3/8"	Sweat	Yes	NC	V8043G1133	VT2253G13A02A
13S16 -101	1/2"	Sweat	Yes	NC	V8043E1004	VT2213G13A02A
13S16 -102	3/4"	Sweat	Yes	NC	V8043E1012	VT2313G13A02A
13S05 -102	3/4"	Sweat	No	NO	V8043B1027	VT2313G23A02A
13S16 -103	1"	Sweat	Yes	NC	V8043E1020	VT2415G13A02A
13SH16 -102**	3/4"	Sweat	Yes	NC		
13SH16 -103**	1"	Sweat	Yes	NC	V8043E1079	VT2417G13A02A**
13N05 -101	1/2"	NPT	No	NO		VT2223G13A02A
13N16 -101	1/2"	NPT	Yes	NC		VT2223G23A020
13N16 -102	3/4"	NPT	Yes	NC	V8043E1145	VT2323G13A02A
13N16 -103	1"	NPT	Yes	NC		VT2427G13A02A
13NH16 -102**	3/4"	NPT	Yes	NC		
13NH16 -103**	1"	NPT	Yes	NC		

*with (2) 3/4" sweat adaptors

**valves are 7.0 Cv. Honeywell and Erie valves are 8.0 Cv.

SPECIFICATIONS

- 24 Vac input voltage
- 50/60 Hz
- 18" leads
- 3.5 Cv flow capacity rating
- Manual Lever
- 20 PSI close-off pressure
- 142 PSI maximum pressure

Zone valves are manufactured in an ISO 9001 certified facility.

EASY MOTOR WIRES CONNECTION

THIN WALL SWEAT BODY (SWEAT SERIES ONLY) FOR EASY SOLDER

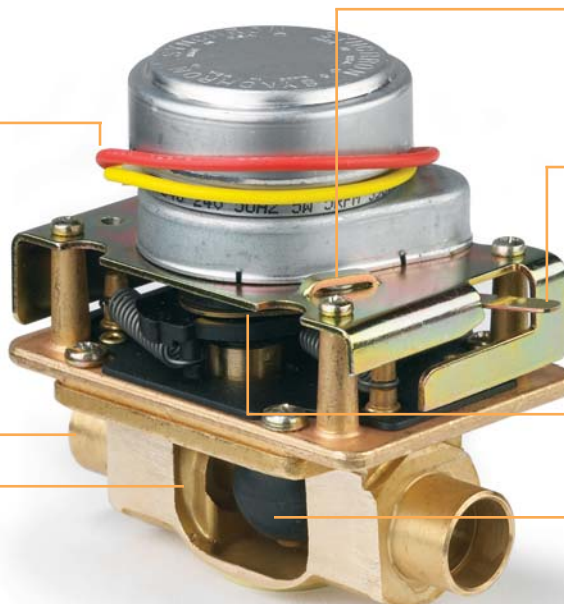
VALVE BODY AND CRANK ARM ASSEMBLIES MADE FROM ONE-PIECE CAST BRASS CONSTRUCTION

LEAFLET AND SCREW MOUNTING FOR EASY MOTOR REPLACEMENT

MANUAL LEVER ON MOST VALVES EXCEPT NORMALLY OPEN ONES

DURABLE PRECISE 14-GAUGE BRASS GEARS PRODUCED BY SWISS WATCH MANUFACTURER

EDPM SWING-TYPE BALL VALVE RESISTS UP TO 230°F



True Champions

WHITE-RODGERS "1300" SERIES HYDRONIC ZONE VALVES

There are two types of White-Rodgers "1300" series zone valves available, 2-wire and 3-wire, for zoning hydronic systems up to 50 PSI. The valves operate quietly and efficiently providing you with comfort and reliability.



The valve stem is made of a corrosion resistant stainless steel and has a self aligning barrel-type design, which uses line pressure to seal off without binding on opening and closing.

The motor can easily be removed from the valve assembly without draining the system, meaning less mess for you. Automatic recycling manual operator shows valve position at all times. Screw terminal wiring panel for added convenience. Built-in auxiliary contacts to control burner or circulator relay.

Model Number	Tubing Size (I.D. Pipe)	Friction Loss Equivalents		ΔP	Max P.	Temp.
		Cv Factor	Ft. of Tubing			
1311/1361 - 102	3/4"	23.5	2-1/2	15 PSI	50 PSI	240°F (116°C)
1311/1361 - 103	1"	37.0	4	15 PSI	50 PSI	240°F (116°C)
1311/1361 - 104	1-1/4"	42.2	7	15 PSI	50 PSI	240°F (116°C)

1311 SERIES SELECTION CHART

- 3-wire
- 24V thermostat circuit rating 0.4A (valve current is 0.4A only during opening or closing. For proper anticipation, select thermostat designed for use with a 3-wire zone valve)
- Time cycle: 45 seconds/open; 45 seconds/close

1361 SERIES SELECTION CHART

- 2-wire
- 24V thermostat circuit rating 0.2A (valve current is 0.52A when opening but 0.2A when fully open; therefore set anticipator for 0.2A)
- Time cycle: 45 seconds/open; 60 seconds/close

REPLACEMENT PARTS

Model No.	Description
F19-0737	Replacement motor with bracket and leads
F19-0190	Replacement motor only (for all models)
Z12ADINV	Adaptor, inverted flare pipe to 1/2" sweat
Z34ADINV	Adaptor, inverted flare pipe to 3/4" sweat
Z1ADINV	Adaptor, inverted flare pipe to 1" sweat
Z12ADFL	Adaptor, flare pipe to 1/2" sweat
Z34ADFL	Adaptor, flare pipe to 3/4" sweat
Z1ADFL	Adaptor, flare pipe to 1" sweat



WHITE-RODGERS

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